

## SEQUENCE LISTING

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TRIPET, Brian

<120> COMPOSITIONS AND METHODS FOR MODIFICATION AND PREVENTION OF SARS  
CORONAVIRUS INFECTIVITY

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<151> 2004-02-12

<160> 106

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 Ala Ala Glu Gln Asp Arg Asn Thr Arg Glu Val Phe Ala Gln Val Lys  
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Gln Met Tyr Lys Thr Pro Thr Leu Lys Tyr Phe Gly Gly Phe Asn Phe  
 770 775 780  
 Ser Gln Ile Leu Pro Asp Pro Leu Lys Pro Thr Lys Arg Ser Phe Ile  
 785 790 795 800  
 Glu Asp Leu Leu Phe Asn Lys Val Thr Leu Ala Asp Ala Gly Phe Met  
 805 810 815  
 Lys Gln Tyr Gly Glu Cys Leu Gly Asp Ile Asn Ala Arg Asp Leu Ile  
 820 825 830  
 Cys Ala Gln Lys Phe Asn Gly Leu Thr Val Leu Pro Pro Leu Leu Thr  
 835 840 845  
 Asp Asp Met Ile Ala Ala Tyr Thr Ala Ala Leu Val Ser Gly Thr Ala  
 850 855 860  
 Thr Ala Gly Trp Thr Phe Gly Ala Gly Ala Ala Leu Gln Ile Pro Phe  
 865 870 875 880  
 Ala Met Gln Met Ala Tyr Arg Phe Asn Gly Ile Gly Val Thr Gln Asn  
 885 890 895  
 Val Leu Tyr Glu Asn Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala  
 900 905 910  
 Ile Ser Gln Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly  
 915 920 925  
 Lys Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu  
 930 935 940  
 Val Lys Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn  
 945 950 955 960  
 Asp Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val Gln Ile Asp  
 965 970 975  
 Arg Leu Ile Thr Gly Arg Leu Gln Ser Leu Gln Thr Tyr Val Thr Gln  
 980 985 990  
 Gln Leu Ile Arg Ala Ala Glu Ile Arg Ala Ser Ala Asn Leu Ala Ala  
 995 1000 1005  
 Thr Lys Met Ser Glu Cys Val Leu Gly Gln Ser Lys Arg Val Asp  
 1010 1015 1020  
 Phe Cys Gly Lys Gly Tyr His Leu Met Ser Phe Pro Gln Ala Ala  
 1025 1030 1035  
 Pro His Gly Val Val Phe Leu His Val Thr Tyr Val Pro Ser Gln

1040	1045	1050
Glu Arg Asn Phe Thr Thr 1055	Ala Pro Ala Ile Cys 1060	His Glu Gly Lys 1065
Ala Tyr Phe Pro Arg Glu 1070	Gly Val Phe Val Phe 1075	Asn Gly Thr Ser 1080
Trp Phe Ile Thr Gln Arg 1085	Asn Phe Phe Ser Pro 1090	Gln Ile Ile Thr 1095
Thr Asp Asn Thr Phe Val 1100	Ser Gly Asn Cys Asp 1105	Val Val Ile Gly 1110
Ile Ile Asn Asn Thr Val 1115	Tyr Asp Pro Leu Gln 1120	Pro Glu Leu Asp 1125
Ser Phe Lys Glu Glu Leu 1130	Asp Lys Tyr Phe Lys 1135	Asn His Thr Ser 1140
Pro Asp Val Asp Leu Gly 1145	Asp Ile Ser Gly Ile 1150	Asn Ala Ser Val 1155
Val Asn Ile Gln Lys Glu 1160	Ile Asp Arg Leu Asn 1165	Glu Val Ala Lys 1170
Asn Leu Asn Glu Ser Leu 1175	Ile Asp Leu Gln Glu 1180	Leu Gly Lys Tyr 1185
Glu Gln Tyr Ile Lys Trp 1190	Pro Trp Tyr Val Trp 1195	Leu Gly Phe Ile 1200
Ala Gly Leu Ile Ala Ile 1205	Val Met Val Thr Ile 1210	Leu Leu Cys Cys 1215
Met Thr Ser Cys Cys Ser 1220	Cys Leu Lys Gly Ala 1225	Cys Ser Cys Gly 1230
Ser Cys Cys Lys Phe Asp 1235	Glu Asp Asp Ser Glu 1240	Pro Val Leu Lys 1245
Gly Val Lys Leu His Tyr 1250	Thr 1255	

<210> 3  
 <211> 390  
 <212> DNA  
 <213> SARS coronavirus Urbani

<220>  
 <221> CDS  
 <222> (1)..(390)

<400> 3  
 atg caa atg gca tat agg ttc aat ggc att gga gtt acc caa aat gtt 48  
 Met Gln Met Ala Tyr Arg Phe Asn Gly Ile Gly Val Thr Gln Asn Val  
 1 5 10 15

ctc tat gag aac caa aaa caa atc gcc aac caa ttt aac aag gcg att 96  
 Leu Tyr Glu Asn Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile  
 20 25 30

agt caa att caa gaa tca ctt aca aca aca tca act gca ttg ggc aag 144  
 Ser Gln Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys  
 35 40 45

ctg caa gac gtt gtt aac cag aat gct caa gca tta aac aca ctt gtt 192  
 Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val  
 50 55 60

aaa caa ctt agc tct aat ttt ggt gca att tca agt gtg cta aat gat 240  
 Lys Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn Asp  
 65 70 75 80

atc ctt tcg cga ctt gat aaa gtc gag gcg gag gta caa att gac agg 288  
 Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val Gln Ile Asp Arg  
 85 90 95

tta att aca ggc aga ctt caa agc ctt caa acc tat gta aca caa caa 336  
 Leu Ile Thr Gly Arg Leu Gln Ser Leu Gln Thr Tyr Val Thr Gln Gln  
 100 105 110

cta atc agg gct gct gaa atc agg gct tct gct aat ctt gct gct act 384  
 Leu Ile Arg Ala Ala Glu Ile Arg Ala Ser Ala Asn Leu Ala Ala Thr  
 115 120 125

aaa atg 390  
 Lys Met  
 130

<210> 4  
 <211> 130  
 <212> PRT  
 <213> SARS coronavirus Urbani

<400> 4  
 Met Gln Met Ala Tyr Arg Phe Asn Gly Ile Gly Val Thr Gln Asn Val  
 1 5 10 15

Leu Tyr Glu Asn Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile  
 20 25 30

Ser Gln Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys  
 35 40 45

Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val  
 50 55 60

Lys Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn Asp  
 65 70 75 80

Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val Gln Ile Asp Arg  
 85 90 95

Leu Ile Thr Gly Arg Leu Gln Ser Leu Gln Thr Tyr Val Thr Gln Gln  
 100 105 110

Leu Ile Arg Ala Ala Glu Ile Arg Ala Ser Ala Asn Leu Ala Ala Thr  
 115 120 125

Lys Met  
 130

<210> 5  
 <211> 276  
 <212> DNA  
 <213> SARS coronavirus Urbani

<220>  
 <221> CDS  
 <222> (1)..(276)

<400> 5  
 atg caa atg gca tat agg ttc aat ggc att gga gtt acc caa aat gtt 48  
 Met Gln Met Ala Tyr Arg Phe Asn Gly Ile Gly Val Thr Gln Asn Val  
 1 5 10 15  
 ctc tat gag aac caa aaa caa atc gcc aac caa ttt aac aag gcg att 96  
 Leu Tyr Glu Asn Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile  
 20 25 30  
 agt caa att caa gaa tca ctt aca aca aca tca act gca ttg ggc aag 144  
 Ser Gln Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys  
 35 40 45  
 ctg caa gac gtt gtt aac cag aat gct caa gca tta aac aca ctt gtt 192  
 Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val  
 50 55 60  
 aaa caa ctt agc tct aat ttt ggt gca att tca agt gtg cta aat gat 240  
 Lys Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn Asp  
 65 70 75 80  
 atc ctt tcg cga ctt gat aaa gtc gag gcg gag gta 276  
 Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val  
 85 90

<210> 6  
 <211> 92  
 <212> PRT  
 <213> SARS coronavirus Urbani

<400> 6  
 Met Gln Met Ala Tyr Arg Phe Asn Gly Ile Gly Val Thr Gln Asn Val  
 1 5 10 15  
 Leu Tyr Glu Asn Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile  
 20 25 30  
 Ser Gln Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys  
 35 40 45  
 Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val  
 50 55 60

Lys Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn Asp  
 65 70 75 80

Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val  
 85 90

<210> 7  
 <211> 174  
 <212> DNA  
 <213> SARS coronavirus Urbani

<220>  
 <221> CDS  
 <222> (1)..(174)

<400> 7  
 att caa gaa tca ctt aca aca aca tca act gca ttg ggc aag ctg caa 48  
 Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys Leu Gln 15  
 1  
 gac gtt gtt aac cag aat gct caa gca tta aac aca ctt gtt aaa caa 96  
 Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val Lys Gln 20 25 30  
 ctt agc tct aat ttt ggt gca att tca agt gtg cta aat gat atc ctt 144  
 Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn Asp Ile Leu 35 40 45  
 tcg cga ctt gat aaa gtc gag gcg gag gta 174  
 Ser Arg Leu Asp Lys Val Glu Ala Glu Val 50 55

<210> 8  
 <211> 58  
 <212> PRT  
 <213> SARS coronavirus Urbani

<400> 8  
 Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys Leu Gln  
 1 5 10 15  
 Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val Lys Gln  
 20 25 30  
 Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn Asp Ile Leu  
 35 40 45  
 Ser Arg Leu Asp Lys Val Glu Ala Glu Val  
 50 55

<210> 9  
 <211> 141  
 <212> DNA  
 <213> SARS coronavirus Urbani

<220>  
 <221> CDS

&lt;222&gt; (1)..(141)

&lt;400&gt; 9

ttg	ggc	aag	ctg	caa	gac	gtt	gtt	aac	cag	aat	gct	caa	gca	tta	aac	48
Leu	Gly	Lys	Leu	Gln	Asp	Val	Val	Asn	Gln	Asn	Ala	Gln	Ala	Leu	Asn	
1				5				10						15		

aca	ctt	gtt	aaa	caa	ctt	agc	tct	aat	ttt	ggt	gca	att	tca	agt	gtg	96
Thr	Leu	Val	Lys	Gln	Leu	Ser	Ser	Asn	Phe	Gly	Ala	Ile	Ser	Ser	Val	
			20					25					30			

cta	aat	gat	atc	ctt	tcg	cga	ctt	gat	aaa	gtc	gag	gcg	gag	gta	141
Leu	Asn	Asp	Ile	Leu	Ser	Arg	Leu	Asp	Lys	Val	Glu	Ala	Glu	Val	
		35					40					45			

&lt;210&gt; 10

&lt;211&gt; 47

&lt;212&gt; PRT

&lt;213&gt; SARS coronavirus Urbani

&lt;400&gt; 10

Leu	Gly	Lys	Leu	Gln	Asp	Val	Val	Asn	Gln	Asn	Ala	Gln	Ala	Leu	Asn
1				5				10						15	

Thr	Leu	Val	Lys	Gln	Leu	Ser	Ser	Asn	Phe	Gly	Ala	Ile	Ser	Ser	Val
			20					25					30		

Leu	Asn	Asp	Ile	Leu	Ser	Arg	Leu	Asp	Lys	Val	Glu	Ala	Glu	Val
		35					40					45		

&lt;210&gt; 11

&lt;211&gt; 114

&lt;212&gt; DNA

&lt;213&gt; SARS coronavirus Urbani

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)..(114)

&lt;400&gt; 11

caa	att	gac	agg	tta	att	aca	ggc	aga	ctt	caa	agc	ctt	caa	acc	tat	48
Gln	Ile	Asp	Arg	Leu	Ile	Thr	Gly	Arg	Leu	Gln	Ser	Leu	Gln	Thr	Tyr	
1				5				10						15		

gta	aca	caa	caa	cta	atc	agg	gct	gct	gaa	atc	agg	gct	tct	gct	aat	96
Val	Thr	Gln	Gln	Leu	Ile	Arg	Ala	Ala	Glu	Ile	Arg	Ala	Ser	Ala	Asn	
			20					25					30			

ctt	gct	gct	act	aaa	atg	114
Leu	Ala	Ala	Thr	Lys	Met	
		35				

&lt;210&gt; 12

&lt;211&gt; 38

&lt;212&gt; PRT

&lt;213&gt; SARS coronavirus Urbani

&lt;400&gt; 12

Gln	Ile	Asp	Arg	Leu	Ile	Thr	Gly	Arg	Leu	Gln	Ser	Leu	Gln	Thr	Tyr
1				5					10					15	

Val Thr Gln Gln Leu Ile Arg Ala Ala Glu Ile Arg Ala Ser Ala Asn  
20 25 30

Leu Ala Ala Thr Lys Met  
35

<210> 13  
<211> 105  
<212> DNA  
<213> SARS coronavirus Urbani

<220>  
<221> CDS  
<222> (1)..(105)

<400> 13  
atg caa atg gca tat agg ttc aat ggc att gga gtt acc caa aat gtt 48  
Met Gln Met Ala Tyr Arg Phe Asn Gly Ile Gly Val Thr Gln Asn Val  
1 5 10 15  
ctc tat gag aac caa aaa caa atc gcc aac caa ttt aac aag gcg att 96  
Leu Tyr Glu Asn Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile  
20 25 30  
agt caa att 105  
Ser Gln Ile  
35

<210> 14  
<211> 35  
<212> PRT  
<213> SARS coronavirus Urbani

<400> 14  
Met Gln Met Ala Tyr Arg Phe Asn Gly Ile Gly Val Thr Gln Asn Val  
1 5 10 15  
Leu Tyr Glu Asn Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile  
20 25 30  
Ser Gln Ile  
35

<210> 15  
<211> 105  
<212> DNA  
<213> SARS coronavirus Urbani

<220>  
<221> CDS  
<222> (1)..(105)

<400> 15  
ttc aat ggc att gga gtt acc caa aat gtt ctc tat gag aac caa aaa 48  
Phe Asn Gly Ile Gly Val Thr Gln Asn Val Leu Tyr Glu Asn Gln Lys  
1 5 10 15  
caa atc gcc aac caa ttt aac aag gcg att agt caa att caa gaa tca 96  
Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile Ser Gln Ile Gln Glu Ser

20 25 30 105

ctt aca aca  
Leu Thr Thr  
35

<210> 16  
<211> 35  
<212> PRT  
<213> SARS coronavirus Urbani

<400> 16

Phe Asn Gly Ile Gly Val Thr Gln Asn Val Leu Tyr Glu Asn Gln Lys  
1 5 10 15

Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile Ser Gln Ile Gln Glu Ser  
20 25 30

Leu Thr Thr  
35

<210> 17  
<211> 105  
<212> DNA  
<213> SARS coronavirus Urbani

<220>  
<221> CDS  
<222> (1)..(105)

<400> 17

caa aat gtt ctc tat gag aac caa aaa caa atc gcc aac caa ttt aac 48  
Gln Asn Val Leu Tyr Glu Asn Gln Lys Gln Ile Ala Asn Gln Phe Asn  
1 5 10 15

aag gcg att agt caa att caa gaa tca ctt aca aca aca tca act gca 96  
Lys Ala Ile Ser Gln Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala  
20 25 30

ttg ggc aag 105  
Leu Gly Lys  
35

<210> 18  
<211> 35  
<212> PRT  
<213> SARS coronavirus Urbani

<400> 18

Gln Asn Val Leu Tyr Glu Asn Gln Lys Gln Ile Ala Asn Gln Phe Asn  
1 5 10 15

Lys Ala Ile Ser Gln Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala  
20 25 30

Leu Gly Lys  
35

<210> 19  
 <211> 105  
 <212> DNA  
 <213> SARS coronavirus Urbani

<220>  
 <221> CDS  
 <222> (1)..(105)

<400> 19  
 caa aaa caa atc gcc aac caa ttt aac aag gcg att agt caa att caa 48  
 Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile Ser Gln Ile Gln  
 1 5 10 15  
 gaa tca ctt aca aca aca tca act gca ttg ggc aag ctg caa gac gtt 96  
 Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys Leu Gln Asp Val  
 20 25 30  
 gtt aac cag 105  
 Val Asn Gln  
 35

<210> 20  
 <211> 35  
 <212> PRT  
 <213> SARS coronavirus Urbani

<400> 20  
 Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile Ser Gln Ile Gln  
 1 5 10 15  
 Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys Leu Gln Asp Val  
 20 25 30  
 Val Asn Gln  
 35

<210> 21  
 <211> 105  
 <212> DNA  
 <213> SARS coronavirus Urbani

<220>  
 <221> CDS  
 <222> (1)..(105)

<400> 21  
 ttt aac aag gcg att agt caa att caa gaa tca ctt aca aca aca tca 48  
 Phe Asn Lys Ala Ile Ser Gln Ile Gln Glu Ser Leu Thr Thr Thr Ser  
 1 5 10 15  
 act gca ttg ggc aag ctg caa gac gtt gtt aac cag aat gct caa gca 96  
 Thr Ala Leu Gly Lys Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala  
 20 25 30  
 tta aac aca 105  
 Leu Asn Thr  
 35

<210> 22  
 <211> 35

<212> PRT  
<213> SARS coronavirus Urbani

<400> 22

Phe Asn Lys Ala Ile Ser Gln Ile Gln Glu Ser Leu Thr Thr Thr Ser  
1 5 10 15

Thr Ala Leu Gly Lys Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala  
20 25 30

Leu Asn Thr  
35

<210> 23  
<211> 105  
<212> DNA  
<213> SARS coronavirus Urbani

<220>  
<221> CDS  
<222> (1)..(105)

<400> 23  
att caa gaa tca ctt aca aca aca tca act gca ttg ggc aag ctg caa 48  
Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys Leu Gln  
1 5 10 15

gac gtt gtt aac cag aat gct caa gca tta aac aca ctt gtt aaa caa 96  
Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val Lys Gln  
20 25 30

ctt agc tct 105  
Leu Ser Ser  
35

<210> 24  
<211> 35  
<212> PRT  
<213> SARS coronavirus Urbani

<400> 24

Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys Leu Gln  
1 5 10 15

Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val Lys Gln  
20 25 30

Leu Ser Ser  
35

<210> 25  
<211> 105  
<212> DNA  
<213> SARS coronavirus Urbani

<220>  
<221> CDS  
<222> (1)..(105)

<400> 25  
 aca tca act gca ttg ggc aag ctg caa gac gtt gtt aac cag aat gct 48  
 Thr Ser Thr Ala Leu Gly Lys Leu Gln Asp Val Val Asn Gln Asn Ala  
 1 5 10 15  
 caa gca tta aac aca ctt gtt aaa caa ctt agc tct aat ttt ggt gca 96  
 Gln Ala Leu Asn Thr Leu Val Lys Gln Leu Ser Ser Asn Phe Gly Ala  
 20 25 30  
 att tca agt 105  
 Ile Ser Ser  
 35

<210> 26  
 <211> 35  
 <212> PRT  
 <213> SARS coronavirus Urbani

<400> 26  
 Thr Ser Thr Ala Leu Gly Lys Leu Gln Asp Val Val Asn Gln Asn Ala  
 1 5 10 15  
 Gln Ala Leu Asn Thr Leu Val Lys Gln Leu Ser Ser Asn Phe Gly Ala  
 20 25 30  
 Ile Ser Ser  
 35

<210> 27  
 <211> 105  
 <212> DNA  
 <213> SARS coronavirus Urbani

<220>  
 <221> CDS  
 <222> (1)..(105)

<400> 27  
 caa gac gtt gtt aac cag aat gct caa gca tta aac aca ctt gtt aaa 48  
 Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val Lys  
 1 5 10 15  
 caa ctt agc tct aat ttt ggt gca att tca agt gtg cta aat gat atc 96  
 Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn Asp Ile  
 20 25 30  
 ctt tcg cga 105  
 Leu Ser Arg  
 35

<210> 28  
 <211> 35  
 <212> PRT  
 <213> SARS coronavirus Urbani

<400> 28  
 Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val Lys  
 1 5 10 15

Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn Asp Ile  
 20 25 30

Leu Ser Arg  
 35

<210> 29  
 <211> 105  
 <212> DNA  
 <213> SARS coronavirus Urbani

<220>  
 <221> CDS  
 <222> (1)..(105)

<400> 29  
 gct caa gca tta aac aca ctt gtt aaa caa ctt agc tct aat ttt ggt 48  
 Ala Gln Ala Leu Asn Thr Leu Val Lys Gln Leu Ser Ser Asn Phe Gly  
 1 5 10 15  
 gca att tca agt gtg cta aat gat atc ctt tcg cga ctt gat aaa gtc 96  
 Ala Ile Ser Ser Val Leu Asn Asp Ile Leu Ser Arg Leu Asp Lys Val  
 20 25 30  
 gag gcg gag 105  
 Glu Ala Glu  
 35

<210> 30  
 <211> 35  
 <212> PRT  
 <213> SARS coronavirus Urbani

<400> 30  
 Ala Gln Ala Leu Asn Thr Leu Val Lys Gln Leu Ser Ser Asn Phe Gly  
 1 5 10 15  
 Ala Ile Ser Ser Val Leu Asn Asp Ile Leu Ser Arg Leu Asp Lys Val  
 20 25 30  
 Glu Ala Glu  
 35

<210> 31  
 <211> 105  
 <212> DNA  
 <213> SARS coronavirus Urbani

<220>  
 <221> CDS  
 <222> (1)..(105)

<400> 31  
 gtt aaa caa ctt agc tct aat ttt ggt gca att tca agt gtg cta aat 48  
 Val Lys Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn  
 1 5 10 15  
 gat atc ctt tcg cga ctt gat aaa gtc gag gcg gag gta caa att gac 96  
 Asp Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val Gln Ile Asp  
 20 25 30

agg tta att  
Arg Leu Ile  
35

105

<210> 32  
<211> 35  
<212> PRT  
<213> SARS coronavirus Urbani

<400> 32

Val Lys Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn  
1 5 10 15

Asp Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val Gln Ile Asp  
20 25 30

Arg Leu Ile  
35

<210> 33  
<211> 105  
<212> DNA  
<213> SARS coronavirus Urbani

<220>  
<221> CDS  
<222> (1)..(105)

<400> 33

ttt ggt gca att tca agt gtg cta aat gat atc ctt tcg cga ctt gat 48  
Phe Gly Ala Ile Ser Ser Val Leu Asn Asp Ile Leu Ser Arg Leu Asp  
1 5 10 15

aaa gtc gag gcg gag gta caa att gac agg tta att aca ggc aga ctt 96  
Lys Val Glu Ala Glu Val Gln Ile Asp Arg Leu Ile Thr Gly Arg Leu  
20 25 30

caa agc ctt 105  
Gln Ser Leu  
35

<210> 34  
<211> 35  
<212> PRT  
<213> SARS coronavirus Urbani

<400> 34

Phe Gly Ala Ile Ser Ser Val Leu Asn Asp Ile Leu Ser Arg Leu Asp  
1 5 10 15

Lys Val Glu Ala Glu Val Gln Ile Asp Arg Leu Ile Thr Gly Arg Leu  
20 25 30

Gln Ser Leu  
35

<210> 35

<211> 105  
 <212> DNA  
 <213> SARS coronavirus Urbani

<220>  
 <221> CDS  
 <222> (1)..(105)

<400> 35  
 cta aat gat atc ctt tcg cga ctt gat aaa gtc gag gcg gag gta caa 48  
 Leu Asn Asp Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val Gln  
 1 5 10 15  
 att gac agg tta att aca ggc aga ctt caa agc ctt caa acc tat gta 96  
 Ile Asp Arg Leu Ile Thr Gly Arg Leu Gln Ser Leu Gln Thr Tyr Val  
 20 25 30  
 aca caa caa 105  
 Thr Gln Gln  
 35

<210> 36  
 <211> 35  
 <212> PRT  
 <213> SARS coronavirus Urbani

<400> 36  
 Leu Asn Asp Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val Gln  
 1 5 10 15  
 Ile Asp Arg Leu Ile Thr Gly Arg Leu Gln Ser Leu Gln Thr Tyr Val  
 20 25 30  
 Thr Gln Gln  
 35

<210> 37  
 <211> 105  
 <212> DNA  
 <213> SARS coronavirus Urbani

<220>  
 <221> CDS  
 <222> (1)..(105)

<400> 37  
 ctt gat aaa gtc gag gcg gag gta caa att gac agg tta att aca ggc 48  
 Leu Asp Lys Val Glu Ala Glu Val Gln Ile Asp Arg Leu Ile Thr Gly  
 1 5 10 15  
 aga ctt caa agc ctt caa acc tat gta aca caa caa cta atc agg gct 96  
 Arg Leu Gln Ser Leu Gln Thr Tyr Val Thr Gln Gln Leu Ile Arg Ala  
 20 25 30  
 gct gaa atc 105  
 Ala Glu Ile  
 35

<210> 38  
 <211> 35  
 <212> PRT

<213> SARS coronavirus Urbani

<400> 38

Leu Asp Lys Val Glu Ala Glu Val Gln Ile Asp Arg Leu Ile Thr Gly  
1 5 10 15

Arg Leu Gln Ser Leu Gln Thr Tyr Val Thr Gln Gln Leu Ile Arg Ala  
20 25 30

Ala Glu Ile  
35

<210> 39

<211> 123

<212> DNA

<213> SARS coronavirus Urbani

<220>

<221> CDS

<222> (1)..(123)

<400> 39

gat gtt gat ctt ggc gac att tca ggc att aac gct tct gtc gtc aac 48  
Asp Val Asp Leu Gly Asp Ile Ser Gly Ile Asn Ala Ser Val Val Asn  
1 5 10 15

att caa aaa gaa att gac cgc ctc aat gag gtc gct aaa aat tta aat 96  
Ile Gln Lys Glu Ile Asp Arg Leu Asn Glu Val Ala Lys Asn Leu Asn  
20 25 30

gaa tca ctc att gac ctt caa gaa ttg 123  
Glu Ser Leu Ile Asp Leu Gln Glu Leu  
35 40

<210> 40

<211> 41

<212> PRT

<213> SARS coronavirus Urbani

<400> 40

Asp Val Asp Leu Gly Asp Ile Ser Gly Ile Asn Ala Ser Val Val Asn  
1 5 10 15

Ile Gln Lys Glu Ile Asp Arg Leu Asn Glu Val Ala Lys Asn Leu Asn  
20 25 30

Glu Ser Leu Ile Asp Leu Gln Glu Leu  
35 40

<210> 41

<211> 63

<212> DNA

<213> SARS coronavirus Urbani

<220>

<221> CDS

<222> (1)..(63)

<400> 41  
 att gac cgc ctc aat gag gtc gct aaa aat tta aat gaa tca ctc att 48  
 Ile Asp Arg Leu Asn Glu Val Ala Lys Asn Leu Asn Glu Ser Leu Ile  
 1 5 10 15  
 gac ctt caa gaa ttg 63  
 Asp Leu Gln Glu Leu  
 20

<210> 42  
 <211> 21  
 <212> PRT  
 <213> SARS coronavirus Urbani

<400> 42  
 Ile Asp Arg Leu Asn Glu Val Ala Lys Asn Leu Asn Glu Ser Leu Ile  
 1 5 10 15  
 Asp Leu Gln Glu Leu  
 20

<210> 43  
 <211> 84  
 <212> DNA  
 <213> SARS coronavirus Urbani

<220>  
 <221> CDS  
 <222> (1)..(84)

<400> 43  
 gtc gtc aac att caa aaa gaa att gac cgc ctc aat gag gtc gct aaa 48  
 Val Val Asn Ile Gln Lys Glu Ile Asp Arg Leu Asn Glu Val Ala Lys  
 1 5 10 15  
 aat tta aat gaa tca ctc att gac ctt caa gaa ttg 84  
 Asn Leu Asn Glu Ser Leu Ile Asp Leu Gln Glu Leu  
 20 25

<210> 44  
 <211> 28  
 <212> PRT  
 <213> SARS coronavirus Urbani

<400> 44  
 Val Val Asn Ile Gln Lys Glu Ile Asp Arg Leu Asn Glu Val Ala Lys  
 1 5 10 15  
 Asn Leu Asn Glu Ser Leu Ile Asp Leu Gln Glu Leu  
 20 25

<210> 45  
 <211> 105  
 <212> DNA  
 <213> SARS coronavirus Urbani

<220>  
 <221> CDS  
 <222> (1)..(105)

<400> 45  
att tca ggc att aac gct tct gtc gtc aac att caa aaa gaa att gac 48  
Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln Lys Glu Ile Asp  
1 5 10 15  
cgc ctc aat gag gtc gct aaa aat tta aat gaa tca ctc att gac ctt 96  
Arg Leu Asn Glu Val Ala Lys Asn Leu Asn Glu Ser Leu Ile Asp Leu  
20 25 30  
caa gaa ttg 105  
Gln Glu Leu  
35

<210> 46  
<211> 35  
<212> PRT  
<213> SARS coronavirus Urbani

<400> 46  
Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln Lys Glu Ile Asp  
1 5 10 15  
Arg Leu Asn Glu Val Ala Lys Asn Leu Asn Glu Ser Leu Ile Asp Leu  
20 25 30  
Gln Glu Leu  
35

<210> 47  
<211> 49  
<212> PRT  
<213> SARS coronavirus Urbani

<400> 47  
Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala Ile Ser Gln Ile Gln  
1 5 10 15  
Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Lys Leu Gln Asp Val  
20 25 30  
Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val Lys Gln Leu Ser  
35 40 45  
Ser

<210> 48  
<211> 36  
<212> PRT  
<213> SARS coronavirus Urbani

<400> 48  
Asp Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln Lys Glu Ile  
1 5 10 15  
Asp Arg Leu Asn Glu Val Ala Lys Asn Leu Asn Glu Ser Leu Ile Asp

20

25

30

Leu Gln Glu Leu  
35

<210> 49  
<211> 1255  
<212> PRT  
<213> SARS coronavirus Urbani

<400> 49

Met Phe Ile Phe Leu Leu Phe Leu Thr Leu Thr Ser Gly Ser Asp Leu  
1 5 10 15

Asp Arg Cys Thr Thr Phe Asp Asp Val Gln Ala Pro Asn Tyr Thr Gln  
20 25 30

His Thr Ser Ser Met Arg Gly Val Tyr Tyr Pro Asp Glu Ile Phe Arg  
35 40 45

Ser Asp Thr Leu Tyr Leu Thr Gln Asp Leu Phe Leu Pro Phe Tyr Ser  
50 55 60

Asn Val Thr Gly Phe His Thr Ile Asn His Thr Phe Gly Asn Pro Val  
65 70 75 80

Ile Pro Phe Lys Asp Gly Ile Tyr Phe Ala Ala Thr Glu Lys Ser Asn  
85 90 95

Val Val Arg Gly Trp Val Phe Gly Ser Thr Met Asn Asn Lys Ser Gln  
100 105 110

Ser Val Ile Ile Ile Asn Asn Ser Thr Asn Val Val Ile Arg Ala Cys  
115 120 125

Asn Phe Glu Leu Cys Asp Asn Pro Phe Phe Ala Val Ser Lys Pro Met  
130 135 140

Gly Thr Gln Thr His Thr Met Ile Phe Asp Asn Ala Phe Asn Cys Thr  
145 150 155 160

Phe Glu Tyr Ile Ser Asp Ala Phe Ser Leu Asp Val Ser Glu Lys Ser  
165 170 175

Gly Asn Phe Lys His Leu Arg Glu Phe Val Phe Lys Asn Lys Asp Gly  
180 185 190

Phe Leu Tyr Val Tyr Lys Gly Tyr Gln Pro Ile Asp Val Val Arg Asp  
195 200 205

Leu Pro Ser Gly Phe Asn Thr Leu Lys Pro Ile Phe Lys Leu Pro Leu  
210 215 220

Gly Ile Asn Ile Thr Asn Phe Arg Ala Ile Leu Thr Ala Phe Ser Pro  
 225 230 235 240  
 Ala Gln Asp Ile Trp Gly Thr Ser Ala Ala Tyr Phe Val Gly Tyr  
 245 250 255  
 Leu Lys Pro Thr Thr Phe Met Leu Lys Tyr Asp Glu Asn Gly Thr Ile  
 260 265 270  
 Thr Asp Ala Val Asp Cys Ser Gln Asn Pro Leu Ala Glu Leu Lys Cys  
 275 280 285  
 Ser Val Lys Ser Phe Glu Ile Asp Lys Gly Ile Tyr Gln Thr Ser Asn  
 290 295 300  
 Phe Arg Val Val Pro Ser Gly Asp Val Val Arg Phe Pro Asn Ile Thr  
 305 310 315 320  
 Asn Leu Cys Pro Phe Gly Glu Val Phe Asn Ala Thr Lys Phe Pro Ser  
 325 330 335  
 Val Tyr Ala Trp Glu Arg Lys Lys Ile Ser Asn Cys Val Ala Asp Tyr  
 340 345 350  
 Ser Val Leu Tyr Asn Ser Thr Phe Phe Ser Thr Phe Lys Cys Tyr Gly  
 355 360 365  
 Val Ser Ala Thr Lys Leu Asn Asp Leu Cys Phe Ser Asn Val Tyr Ala  
 370 375 380  
 Asp Ser Phe Val Val Lys Gly Asp Asp Val Arg Gln Ile Ala Pro Gly  
 385 390 395 400  
 Gln Thr Gly Val Ile Ala Asp Tyr Asn Tyr Lys Leu Pro Asp Asp Phe  
 405 410 415  
 Met Gly Cys Val Leu Ala Trp Asn Thr Arg Asn Ile Asp Ala Thr Ser  
 420 425 430  
 Thr Gly Asn Tyr Asn Tyr Lys Tyr Arg Tyr Leu Arg His Gly Lys Leu  
 435 440 445  
 Arg Pro Phe Glu Arg Asp Ile Ser Asn Val Pro Phe Ser Pro Asp Gly  
 450 455 460  
 Lys Pro Cys Thr Pro Pro Ala Leu Asn Cys Tyr Trp Pro Leu Asn Asp  
 465 470 475 480  
 Tyr Gly Phe Tyr Thr Thr Thr Gly Ile Gly Tyr Gln Pro Tyr Arg Val  
 485 490 495

Val Val Leu Ser Phe Glu Leu Leu Asn Ala Pro Ala Thr Val Cys Gly  
 500 505 510  
 Pro Lys Leu Ser Thr Asp Leu Ile Lys Asn Gln Cys Val Asn Phe Asn  
 515 520 525  
 Phe Asn Gly Leu Thr Gly Thr Gly Val Leu Thr Pro Ser Ser Lys Arg  
 530 535 540  
 Phe Gln Pro Phe Gln Gln Phe Gly Arg Asp Val Ser Asp Phe Thr Asp  
 545 550 555 560  
 Ser Val Arg Asp Pro Lys Thr Ser Glu Ile Leu Asp Ile Ser Pro Cys  
 565 570 575  
 Ser Phe Gly Gly Val Ser Val Ile Thr Pro Gly Thr Asn Ala Ser Ser  
 580 585 590  
 Glu Val Ala Val Leu Tyr Gln Asp Val Asn Cys Thr Asp Val Ser Thr  
 595 600 605  
 Ala Ile His Ala Asp Gln Leu Thr Pro Ala Trp Arg Ile Tyr Ser Thr  
 610 615 620  
 Gly Asn Asn Val Phe Gln Thr Gln Ala Gly Cys Leu Ile Gly Ala Glu  
 625 630 635 640  
 His Val Asp Thr Ser Tyr Glu Cys Asp Ile Pro Ile Gly Ala Gly Ile  
 645 650 655  
 Cys Ala Ser Tyr His Thr Val Ser Leu Leu Arg Ser Thr Ser Gln Lys  
 660 665 670  
 Ser Ile Val Ala Tyr Thr Met Ser Leu Gly Ala Asp Ser Ser Ile Ala  
 675 680 685  
 Tyr Ser Asn Asn Thr Ile Ala Ile Pro Thr Asn Phe Ser Ile Ser Ile  
 690 695 700  
 Thr Thr Glu Val Met Pro Val Ser Met Ala Lys Thr Ser Val Asp Cys  
 705 710 715 720  
 Asn Met Tyr Ile Cys Gly Asp Ser Thr Glu Cys Ala Asn Leu Leu Leu  
 725 730 735  
 Gln Tyr Gly Ser Phe Cys Thr Gln Leu Asn Arg Ala Leu Ser Gly Ile  
 740 745 750  
 Ala Ala Glu Gln Asp Arg Asn Thr Arg Glu Val Phe Ala Gln Val Lys  
 755 760 765  
 Gln Met Tyr Lys Thr Pro Thr Leu Lys Tyr Phe Gly Gly Phe Asn Phe

770	775	780
Ser 785	Gln Ile Leu Pro Asp 790	Pro Leu Lys Pro Thr 795
Lys Arg Ser Phe Ile 800		
Glu Asp Leu Leu Phe 805	Asn Lys Val Thr 810	Ala Asp Ala Gly Phe Met 815
Lys Gln Tyr Gly 820	Glu Cys Leu Gly Asp 825	Ile Asn Ala Arg Asp 830
Cys Ala Gln 835	Lys Phe Asn Gly 840	Leu Thr Val Leu Pro 845
Asp Asp Met Ile Ala Ala Tyr 855	Thr Ala Ala Leu Val 860	Ser Gly Thr Ala
Thr 865	Ala Gly Trp Thr Phe 870	Gly Ala Gly Ala 875
Leu Gln Ile Pro Phe 880		
Ala Met Gln Met Ala 885	Tyr Arg Phe Asn Gly 890	Ile Gly Val Thr Gln Asn 895
Val Leu Tyr Glu 900	Asn Gln Lys Gln Ile 905	Ala Asn Gln Phe Asn Lys Ala 910
Ile Ser Gln 915	Ile Gln Glu Ser Leu 920	Thr Thr Thr Ser Thr 925
Ala Leu Gly		
Lys Leu Gln Asp Val Val 935	Asn Gln Asn Ala Gln 940	Ala Leu Asn Thr Leu
Val 945	Lys Gln Leu Ser Ser 950	Asn Phe Gly Ala Ile 955
Ser Ser Val Leu Asn 960		
Asp Ile Leu Ser Arg 965	Leu Asp Lys Val Glu 970	Ala Glu Val Gln Ile Asp 975
Arg Leu Ile Thr 980	Gly Arg Leu Gln Ser 985	Leu Gln Thr Tyr Val Thr Gln 990
Gln Leu Ile 995	Arg Ala Ala Glu Ile 1000	Arg Ala Ser Ala Asn 1005
Leu Ala Ala		
Thr Lys 1010	Met Ser Glu Cys Val 1015	Leu Gly Gln Ser Lys 1020
Arg Val Asp		
Phe Cys 1025	Gly Lys Gly Tyr His 1030	Leu Met Ser Phe Pro 1035
Gln Ala Ala		
Pro His 1040	Gly Val Val Phe Leu 1045	His Val Thr Tyr Val 1050
Pro Ser Gln		

Glu Arg Asn Phe Thr Thr Ala Pro Ala Ile Cys His Glu Gly Lys  
 1055 1060 1065  
 Ala Tyr Phe Pro Arg Glu Gly Val Phe Val Phe Asn Gly Thr Ser  
 1070 1075 1080  
 Trp Phe Ile Thr Gln Arg Asn Phe Phe Ser Pro Gln Ile Ile Thr  
 1085 1090 1095  
 Thr Asp Asn Thr Phe Val Ser Gly Asn Cys Asp Val Val Ile Gly  
 1100 1105 1110  
 Ile Ile Asn Asn Thr Val Tyr Asp Pro Leu Gln Pro Glu Leu Asp  
 1115 1120 1125  
 Ser Phe Lys Glu Glu Leu Asp Lys Tyr Phe Lys Asn His Thr Ser  
 1130 1135 1140  
 Pro Asp Val Asp Leu Gly Asp Ile Ser Gly Ile Asn Ala Ser Val  
 1145 1150 1155  
 Val Asn Ile Gln Lys Glu Ile Asp Arg Leu Asn Glu Val Ala Lys  
 1160 1165 1170  
 Asn Leu Asn Glu Ser Leu Ile Asp Leu Gln Glu Leu Gly Lys Tyr  
 1175 1180 1185  
 Glu Gln Tyr Ile Lys Trp Pro Trp Tyr Val Trp Leu Gly Phe Ile  
 1190 1195 1200  
 Ala Gly Leu Ile Ala Ile Val Met Val Thr Ile Leu Leu Cys Cys  
 1205 1210 1215  
 Met Thr Ser Cys Cys Ser Cys Leu Lys Gly Ala Cys Ser Cys Gly  
 1220 1225 1230  
 Ser Cys Cys Lys Phe Asp Glu Asp Asp Ser Glu Pro Val Leu Lys  
 1235 1240 1245  
 Gly Val Lys Leu His Tyr Thr  
 1250 1255

<210> 50  
 <211> 35  
 <212> PRT  
 <213> SARS coronavirus Urbani

<400> 50

Ile Gln Glu Ser Leu Thr Thr Thr ser Thr Ala Leu Gly Lys Leu Gln  
 1 5 10 15

Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu Val Lys Gln  
20 25 30

Leu Ser Ser  
35

<210> 51  
<211> 35  
<212> PRT  
<213> Artificial

<220>  
<223> synthetic peptide

<400> 51

Ile Gln Ala Ala Leu Thr Lys Thr Ser Ala Ala Leu Gly Lys Leu Gln  
1 5 10 15

Ala Ala Val Asn Arg Asn Ala Ala Ala Leu Asn Lys Leu Val Lys Ala  
20 25 30

Leu Ser Ser  
35

<210> 52  
<211> 35  
<212> PRT  
<213> Artificial

<220>  
<223> synthetic peptide

<220>  
<221> MISC\_FEATURE  
<222> (1)..(35)  
<223> X=aminoisobutyric acid

<400> 52

Ile Gln Glu Ser Leu Thr Xaa Thr Ser Thr Ala Leu Gly Lys Leu Gln  
1 5 10 15

Asp Val Val Asn Xaa Asn Ala Gln Ala Leu Asn Xaa Leu Val Lys Gln  
20 25 30

Leu Ser Ser  
35

<210> 53  
<211> 35  
<212> PRT  
<213> Artificial

<220>  
<223> synthetic peptide

<220>  
<221> MISC\_FEATURE

&lt;222&gt; (1)..(35)

&lt;223&gt; X=dipropyl or dibutyl glycine

&lt;400&gt; 53

Ile	Gln	Glu	Ser	Leu	Thr	Xaa	Thr	Ser	Thr	Ala	Leu	Gly	Lys	Leu	Gln
1				5					10					15	

Asp	Val	Val	Asn	Xaa	Asn	Ala	Gln	Ala	Leu	Asn	Xaa	Leu	Val	Lys	Gln
			20					25					30		

Leu	Ser	Ser
		35

&lt;210&gt; 54

&lt;211&gt; 35

&lt;212&gt; PRT

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; synthetic peptide

&lt;220&gt;

&lt;221&gt; MISC\_FEATURE

&lt;222&gt; (17)..(21)

&lt;223&gt; i,i+4 lactam bridge

&lt;400&gt; 54

Ile	Gln	Glu	Ser	Leu	Thr	Thr	Thr	Ser	Thr	Ala	Leu	Gly	Lys	Leu	Gln
1				5					10					15	

Glu	Val	Val	Asn	Lys	Asn	Ala	Gln	Ala	Leu	Asn	Thr	Leu	Val	Lys	Gln
			20					25					30		

Leu	Ser	Ser
		35

&lt;210&gt; 55

&lt;211&gt; 35

&lt;212&gt; PRT

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; synthetic peptide

&lt;220&gt;

&lt;221&gt; MISC\_FEATURE

&lt;222&gt; (7)..(11)

&lt;223&gt; i, i+4 lactam bridge

&lt;220&gt;

&lt;221&gt; MISC\_FEATURE

&lt;222&gt; (28)..(32)

&lt;223&gt; i, i+4 lactam bridge

&lt;400&gt; 55

Ile	Gln	Glu	Ser	Leu	Thr	Glu	Thr	Ser	Thr	Lys	Leu	Gly	Lys	Leu	Gln
1				5					10					15	

Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Glu Leu Val Lys Lys  
20 25 30

Leu Ser Ser  
35

<210> 56  
<211> 35  
<212> PRT  
<213> Artificial

<220>  
<223> synthetic peptide

<220>  
<221> MISC\_FEATURE  
<222> (14)..(21)  
<223> i, i+7 bridge

<400> 56

Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly Glu Leu Gln  
1 5 10 15

Asp Val Val Asn Glu Asn Ala Gln Ala Leu Asn Thr Leu Val Lys Gln  
20 25 30

Leu Ser Ser  
35

<210> 57  
<211> 35  
<212> PRT  
<213> Artificial

<220>  
<223> synthetic peptide

<400> 57

Ile Ile Glu Ser Leu Thr Thr Thr Ile Thr Ala Leu Gly Lys Leu Ile  
1 5 10 15

Asp Val Leu Asn Gln Asn Ile Gln Ala Leu Asn Thr Leu Ile Lys Gln  
20 25 30

Leu Ser Ser  
35

<210> 58  
<211> 35  
<212> PRT  
<213> SARS coronavirus Urbani

<400> 58

Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln Lys Glu Ile Asp  
1 5 10 15

Arg Leu Asn Glu Val Ala Lys Asn Leu Asn Glu Ser Leu Ile Asp Leu  
20 25 30

Gln Glu Leu  
35

<210> 59  
<211> 35  
<212> PRT  
<213> Artificial

<220>  
<223> synthetic peptide

<400> 59

Ile Ala Ala Ile Asn Lys Ser Val Ala Ala Ile Gln Lys Glu Ile Ala  
1 5 10 15

Arg Leu Asn Glu Val Ala Lys Ala Leu Asn Ala Ser Leu Ile Arg Leu  
20 25 30

Gln Ala Leu  
35

<210> 60  
<211> 35  
<212> PRT  
<213> Artificial

<220>  
<223> synthetic peptide

<220>  
<221> MISC\_FEATURE  
<222> (1)..(35)  
<223> X=aminoisobutyric acid (Aib)

<400> 60

Ile Ser Gly Ile Asn Xaa Ser Val Val Asn Ile Gln Lys Glu Ile Asp  
1 5 10 15

Arg Leu Asn Xaa Val Ala Lys Asn Leu Asn Xaa Ser Leu Ile Asp Leu  
20 25 30

Gln Glu Leu  
35

<210> 61  
<211> 35  
<212> PRT  
<213> Artificial

<220>  
<223> synthetic peptide

<220>

<221> MISC\_FEATURE  
 <222> (1)..(35)  
 <223> X=dipropyl or dibutyl glycine

<400> 61

Ile Ser Gly Ile Asn Xaa Ser Val Val Asn Ile Gln Lys Glu Ile Asp  
 1 5 10 15

Arg Leu Asn Xaa Val Ala Lys Asn Leu Asn Xaa Ser Leu Ile Asp Leu  
 20 25 30

Gln Glu Leu  
 35

<210> 62  
 <211> 35  
 <212> PRT  
 <213> Artificial

<220>  
 <223> synthetic peptide

<220>  
 <221> MISC\_FEATURE  
 <222> (16)..(20)  
 <223> i,i+4 lactam bridge

<400> 62

Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln Lys Glu Ile Glu  
 1 5 10 15

Arg Leu Asn Lys Val Ala Lys Asn Leu Asn Glu Ser Leu Ile Asp Leu  
 20 25 30

Gln Glu Leu  
 35

<210> 63  
 <211> 35  
 <212> PRT  
 <213> Artificial

<220>  
 <223> synthetic peptide

<220>  
 <221> MISC\_FEATURE  
 <222> (6)..(10)  
 <223> i,i+4 lactam bridge

<220>  
 <221> MISC\_FEATURE  
 <222> (27)..(31)  
 <223> i,i+4 lactam bridge

<400> 63

Ile Ser Gly Ile Asn Glu Ser Val Val Lys Ile Gln Lys Glu Ile Asp  
 1 5 10 15

Arg Leu Asn Glu Val Ala Lys Asn Leu Asn Glu Ser Leu Ile Lys Leu  
20 25 30

Gln Glu Leu  
35

<210> 64  
<211> 35  
<212> PRT  
<213> Artificial

<220>  
<223> synthetic peptide

<220>  
<221> MISC\_FEATURE  
<222> (13)..(20)  
<223> i,i+7 bridge

<400> 64

Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln Glu Glu Ile Asp  
1 5 10 15

Arg Leu Asn Glu Val Ala Lys Asn Leu Asn Glu Ser Leu Ile Asp Leu  
20 25 30

Gln Glu Leu  
35

<210> 65  
<211> 35  
<212> PRT  
<213> Artificial

<220>  
<223> synthetic peptide

<400> 65

Ile Ser Gly Ile Asn Ala Ser Ile Val Asn Ile Gln Lys Glu Ile Asp  
1 5 10 15

Arg Leu Asn Glu Val Ile Lys Asn Leu Asn Glu Ser Leu Ile Asp Leu  
20 25 30

Gln Glu Leu  
35

<210> 66  
<211> 39  
<212> PRT  
<213> SARS coronavirus Urbani

<400> 66

Asp Leu Gly Asp Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln  
1 5 10 15

Lys Glu Ile Asp Arg Leu Asn Glu Val Ala Lys Asn Leu Asn Glu Ser  
20 25 30

Leu Ile Asp Leu Gln Glu Leu  
35

<210> 67  
<211> 36  
<212> PRT  
<213> Artificial

<220>  
<223> synthetic peptide

<400> 67

Asp Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln Lys Glu Ile  
1 5 10 15

Asp Arg Leu Asn Glu Val Ile Lys Asn Leu Asn Glu Ser Leu Ile Asp  
20 25 30

Leu Gln Glu Leu  
35

<210> 68  
<211> 36  
<212> PRT  
<213> Artificial

<220>  
<223> synthetic peptide

<400> 68

Asp Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln Lys Glu Ile  
1 5 10 15

Ala Arg Leu Asn Glu Val Ala Lys Ala Leu Asn Glu Ser Leu Ile Asp  
20 25 30

Leu Gln Glu Leu  
35

<210> 69  
<211> 36  
<212> PRT  
<213> Artificial

<220>  
<223> synthetic peptide

<400> 69

Asp Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln Lys Glu Ile  
1 5 10 15

Ala Arg Leu Asn Glu Val Ile Lys Ala Leu Asn Glu Ser Leu Ile Asp  
Page 37

20

25

30

Leu Gln Glu Leu  
35

<210> 70  
<211> 36  
<212> PRT  
<213> Artificial

<220>  
<223> synthetic peptide

<400> 70

Asp Ile Ala Ala Ile Asn Ala Ser Val Ala Asn Ile Gln Lys Glu Ile  
1 5 10 15

Ala Arg Leu Asn Glu Val Ala Lys Ala Leu Asn Glu Ser Leu Ala Ala  
20 25 30

Leu Gln Ala Leu  
35

<210> 71  
<211> 36  
<212> PRT  
<213> Artificial

<220>  
<223> synthetic peptide

<220>  
<221> MISC\_FEATURE  
<222> (17)..(21)  
<223> relative to residues 1166 to 1170; lactam bridge

<400> 71

Asp Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln Lys Glu Ile  
1 5 10 15

Glu Arg Leu Asn Lys Val Ala Lys Asn Leu Asn Glu Ser Leu Ile Asp  
20 25 30

Leu Gln Glu Leu  
35

<210> 72  
<211> 36  
<212> PRT  
<213> Artificial

<220>  
<223> synthetic peptide

<220>  
<221> MISC\_FEATURE  
<222> (17)..(21)

<223> salt bridge

<400> 72

Asp Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln Lys Glu Ile  
1 5 10 15

Glu Arg Leu Asn Lys Val Ala Lys Asn Leu Asn Glu Ser Leu Ile Asp  
20 25 30

Leu Gln Glu Leu  
35

<210> 73

<211> 36

<212> PRT

<213> Artificial

<220>

<223> synthetic peptide

<400> 73

Asp Ile Glu Glu Ile Asn Lys Lys Val Glu Glu Ile Gln Lys Lys Ile  
1 5 10 15

Glu Glu Leu Asn Lys Lys Ala Glu Glu Leu Asn Lys Lys Leu Glu Glu  
20 25 30

Leu Gln Lys Lys  
35

<210> 74

<211> 36

<212> PRT

<213> Artificial

<220>

<223> synthetic peptide

<220>

<221> MISC\_FEATURE

<222> (1)..(36)

<223> Introduction of salt bridges relating to mutations departing from  
SEQ ID NO:48 (HR-C4a extended; 1150-1185)

<400> 74

Asp Ile Ser Gly Ile Asn Ala Ser Val Val Glu Ile Gln Lys Lys Ile  
1 5 10 15

Glu Glu Leu Asn Lys Lys Ala Glu Glu Leu Asn Lys Lys Leu Ile Asp  
20 25 30

Leu Gln Glu Leu  
35

<210> 75

<211> 7

<212> PRT  
<213> Artificial

<220>  
<223> Synthetic peptide

<400> 75

Ile Gln Glu Ser Leu Thr Thr  
1 5

<210> 76  
<211> 7  
<212> PRT  
<213> Artificial

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<400> 76

Thr Ser Thr Ala Leu Gly Lys  
1 5

<210> 77  
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<400> 77

Leu Gln Asp Val Val Asn Gln  
1 5

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<220>  
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Asn Ala Gln Ala Leu Asn Thr  
1 5

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Leu Val Lys Gln Leu Ser Ser  
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<210> 83  
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<210> 84  
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Asp Val Val Asn Gln  
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Gln Ala Leu Asn Thr  
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Lys Gln Leu Ser Ser  
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Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr  
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<220>  
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<400> 88

Thr Ser Thr Ala Leu Gly Lys Leu Gln Asp Val Val Asn Gln Asn Ala  
Page 42

1

5

10

15

Gln Ala Leu Asn Thr Leu Val Lys Gln Leu Ser Ser  
                   20                  25

<210> 89  
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Val Val Asn Ile Gln Lys Glu  
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<210> 91  
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Ala Lys Asn Leu Asn Glu Ser  
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Leu Ile Asp Leu Gln Glu Leu  
1 5

<210> 94

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Ile Ser Gly Ile Asn Ala Ser Val Val Asn Ile Gln Lys Glu  
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Ile Asp Arg Leu Asn Glu Val Ala Lys Asn Leu Asn Glu Ser  
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<211> 14

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Ala Lys Asn Leu Asn Glu Ser Leu Ile Asp Leu Gln Glu Leu  
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<211> 21

<212> PRT

<213> Artificial

&lt;220&gt;

&lt;223&gt; Synthetic peptide

&lt;400&gt; 98

Ile	Ser	Gly	Ile	Asn	Ala	Ser	Val	Val	Asn	Ile	Gln	Lys	Glu	Ile	Asp
1				5					10					15	

Arg	Leu	Asn	Glu	Val
			20	

&lt;210&gt; 99

&lt;211&gt; 21

&lt;212&gt; PRT

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; Synthetic peptide

&lt;400&gt; 99

Val	Val	Asn	Ile	Gln	Lys	Glu	Ile	Asp	Arg	Leu	Asn	Glu	Val	Ala	Lys
1				5					10					15	

Asn	Leu	Asn	Glu	Ser
			20	

&lt;210&gt; 100

&lt;211&gt; 21

&lt;212&gt; PRT

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; Synthetic peptide

&lt;400&gt; 100

Ile	Asp	Arg	Leu	Asn	Glu	Val	Ala	Lys	Asn	Leu	Asn	Glu	Ser	Leu	Ile
1				5					10					15	

Asp	Leu	Gln	Glu	Leu
			20	

&lt;210&gt; 101

&lt;211&gt; 28

&lt;212&gt; PRT

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; Synthetic peptide

&lt;400&gt; 101

Ile	Ser	Gly	Ile	Asn	Ala	Ser	Val	Val	Asn	Ile	Gln	Lys	Glu	Ile	Asp
1				5					10					15	

Arg	Leu	Asn	Glu	Val	Ala	Lys	Asn	Leu	Asn	Glu	Ser
			20					25			

&lt;210&gt; 102

&lt;211&gt; 28

<212> PRT  
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<220>  
 <223> Synthetic peptide

<400> 102

Val Val Asn Ile Gln Lys Glu Ile Asp Arg Leu Asn Glu Val Ala Lys  
 1 5 10 15

Asn Leu Asn Glu Ser Leu Ile Asp Leu Gln Glu Leu  
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<220>  
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<210> 105  
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<220>  
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<400> 105  
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<210> 106  
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 <212> DNA  
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 <223> Synthetic construct

<400> 106  
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